

## **AMENDMENTS TO THE CLAIMS**

1-16. (Canceled)

17. (Currently Amended) An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non-recorded portions with energy injected into the recording medium, comprising:

energy generation means which generates recording energy;

reading means which reads marks recorded on the recording medium;

position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;

drive means which drives the energy generation means;

switching means which selectively switches information based on user's data or test information to be supplied to the drive means;

evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein the apparatus is operated in a first condition and a second condition in a case of reproducing the marks having corresponding to the test information, a target condition of a track following servo operation of the position control means is unchanged in a first reproduction in comparison in reproduction under the first condition as compared with a time a track servo condition in a time when the test information is recorded, and is changed in a second reproduction in comparison with a time in reproduction under the second condition as compared with the track servo condition in the time when the test information is recorded,

wherein the changed content of the control operation for the position control means is a tracking-offset amount, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording

medium, and in phase mark arrangement is recorded on as recorded marks formed side by side among adjacent tracks,

wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a ~~conversion~~ encoding means is used,

wherein the test information containing a longer run-length than a run-length rule of the ~~conversion~~ encoding means is used ~~as the test information~~, and

wherein the recording condition is controlled in accordance with a signal amplitude in the first ~~reproduction~~ condition and a signal amplitude in the second ~~reproduction~~ condition.

18. (Currently Amended) An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non-recorded portions with energy injected into the recording medium, comprising:

- energy generation means which generates recording energy;
- reading means which reads marks recorded on the recording medium;
- position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;
- drive means which drives the energy generation means;
- switching means which selectively switches information based on user's data or test information to be supplied to the drive means;
- evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and
- recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein the apparatus is operated in a first condition and a second condition in a ~~case of reproducing the marks having~~ corresponding to the test information, a target condition of a track ~~following~~ servo operation of the position control means is unchanged ~~in a first reproduction in comparison~~ in reproduction under the first condition as compared with a time a track servo condition in a time when the test information is recorded, and is

~~changed in a second reproduction in comparison with a time in reproduction under the~~  
second condition as compared with the track servo condition in the time when the test  
information is recorded,

wherein the changed content of the control operation for the position control  
means is a tracking polarity, indicated by the position control means in a case where the  
test information is supplied to the drive means and recorded on the recording medium;  
~~and in-phase mark arrangement is recorded on~~ as recorded marks formed side by side  
among adjacent tracks,

wherein in a case where the test information is supplied to the drive means and  
recorded on the recording medium, the test information inconsistent with a conversion rule  
of a ~~conversion~~ encoding means is used,

wherein the test information containing a longer run-length than a run-length rule  
of the ~~conversion~~ encoding means is used ~~as the test information~~, and

wherein the recording condition is controlled in accordance with a signal  
amplitude in the first ~~reproduction~~ condition and a signal amplitude in the second  
~~reproduction~~ condition.

19. (Currently Amended) An information recording apparatus for recording  
information on a recording medium by forming marks different in a physical property from  
non-recorded portions with energy injected into the recording medium, comprising:
- energy generation means which generates recording energy;
  - reading means which reads marks recorded on the recording medium;
  - position control means which controls an injecting position of the recording energy  
output from the energy generation means for the recording medium and controls a reading  
position of the reading means;
  - drive means which drives the energy generation means;
  - switching means which selectively switches information based on user's data or  
test information to be supplied to the drive means;
  - evaluation means which evaluates a reproduced signal amplitude obtained from  
the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein ~~the apparatus is operated in a first condition and a second condition in a case of reproducing the marks having corresponding to the test information, a target condition of a track following servo operation of the position control means is unchanged in a first reproduction in comparison~~ in reproduction under the first condition as compared with a time a track servo condition in a time when the test information is recorded, and is changed in a second reproduction in comparison with a time in reproduction under the second condition as compared with the track servo condition in the time when the test information is recorded,

wherein the changed content of the control operation for the position control means is a stop or a start of a tracking operation, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, ~~and in phase mark arrangement is recorded on~~ as recorded marks are formed side by side among adjacent tracks,

wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a ~~conversion encoding~~ means is used,

wherein the test information containing a longer run-length than a run-length rule of the ~~conversion encoding~~ means is used ~~as the test information~~, and

wherein the recording condition is controlled in accordance with a signal amplitude in the first ~~reproduction condition~~ and a signal amplitude in the second ~~reproduction condition~~.

20. (Currently Amended) An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non recorded portions with energy injected into the recording medium, comprising:  
energy generation means which generates recording energy;  
reading means which reads marks recorded on the recording medium;

position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;

vibration means which vibrates the reading means in a direction perpendicular to a main scanning direction on the recording medium and in parallel with the recording medium;

drive means which drives the energy generation means;

switching means which selectively switches information based on user's data or test information to be supplied to the drive means;

evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein the apparatus is operated in a first condition and a second condition in a case of reproducing the marks having corresponding to the test information, a target condition of a track following servo operation of the position control means is unchanged in a first reproduction in comparison in reproduction under the first condition as compared with a time a track servo condition in a time when the test information is recorded, and is changed in a second reproduction in comparison with a time in reproduction under the second condition as compared with the track servo condition in the time when the test information is recorded,

wherein the changed content of the control operation for the position control means is a stop or a start of vibrating operation of the vibrating means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on as recorded marks are formed side by side among adjacent tracks,

wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion encoding means is used,

wherein test information containing a longer run-length than a run-length rule of the conversion encoding means is used ~~as the test information,~~ and

**Serial No: 10/622,450**  
**Docket No: 29284-592**

wherein the recording condition is controlled in accordance with a signal amplitude in the first ~~reproduction~~ condition and a signal amplitude in the second ~~reproduction~~ condition.

21-37. (Canceled)